Docket No.: MSFT-2756/302351
App No.: Not yet assigned
Title: Optimized Recovery Logging
Inventors: David B. Lomet and Roger S. Barga
Attorney: Susan C. Murphy
Sheet 1 of 8

Filed: November 24, 2003

Phone: (215) 568-3100

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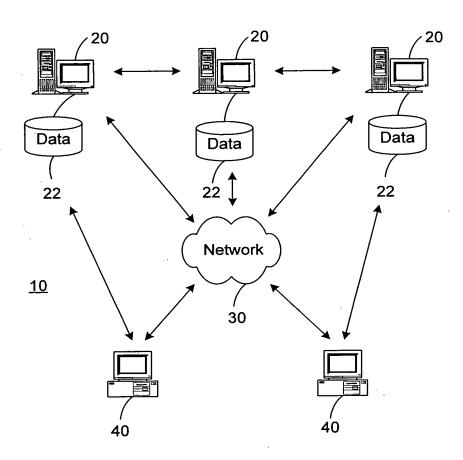


Fig. 1

2/8 Computer Recovery Mgr <u>205</u> Client 200 Log <u>207</u> Call Return<sup>†</sup> Log Mgr <u>206</u> Runtime **Tables** <u>208</u> <u>202</u> Call Return **Proxy** 209 Process/Machine Interface 210 Return Stub <u>211</u> Return, Ćali Computer Recovery Mgr 225 Runtime <u>222</u> Log <u>227</u> Return Call **↓** Log Mgr <u>226</u> Server 220 Tables <u>228</u>

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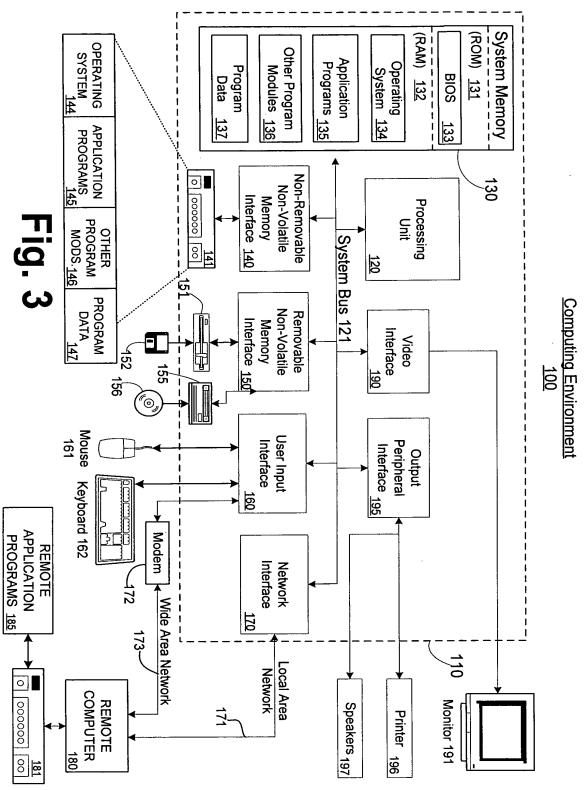
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Fig. 2

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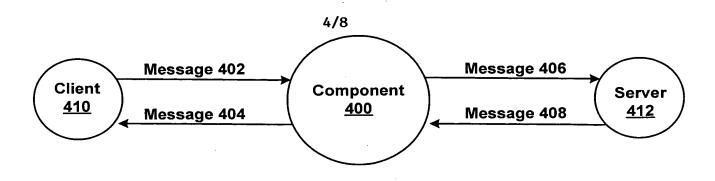
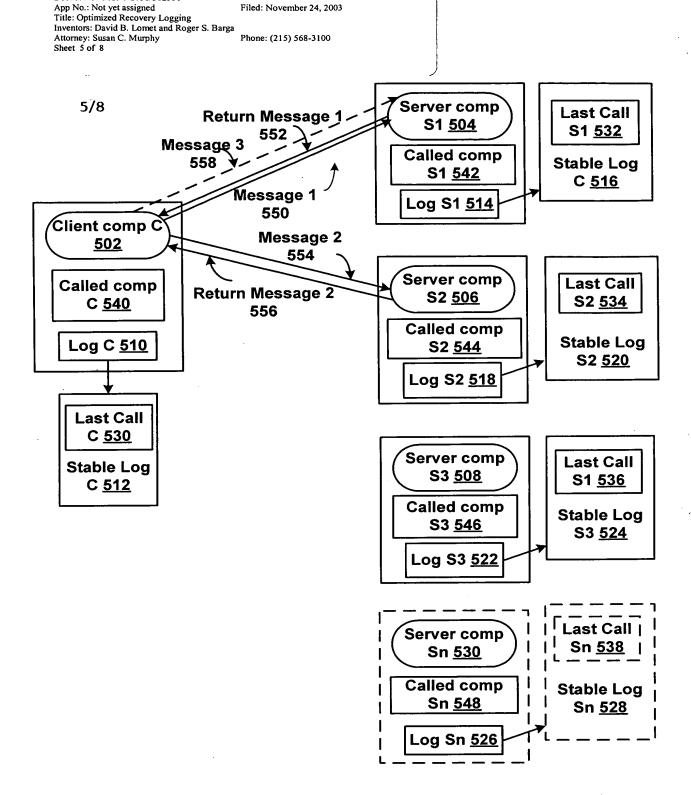


Fig. 4



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Fig. 5

Attorney: Susan C. Murphy Phone: (215) 568-3100 Sheet 6 of 8 6/8 Non-Forc Log determinism? <u>604</u> yes <u>602</u> no C sends S1 executes S1 receives first call to call 608 <u>609</u> S1 606 S1 sends S1 stably C receives logs return return to C return 614 610 <u>612</u> В C sends S2 executes S2 receives first call to call 616 **617** S2 615 S2 sends S2 stably C receives return to C logs return return 622 <u>618</u> <u>620</u> C sends S1 receives S1 execut s second call <u>627</u> call <u>626</u> to S1 624 C stably logs return <u>623</u> S1 sends S1 stably logs return <del>ret</del>urn to C C receives <u>630</u> <u>628</u> return 632

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Fig. 6

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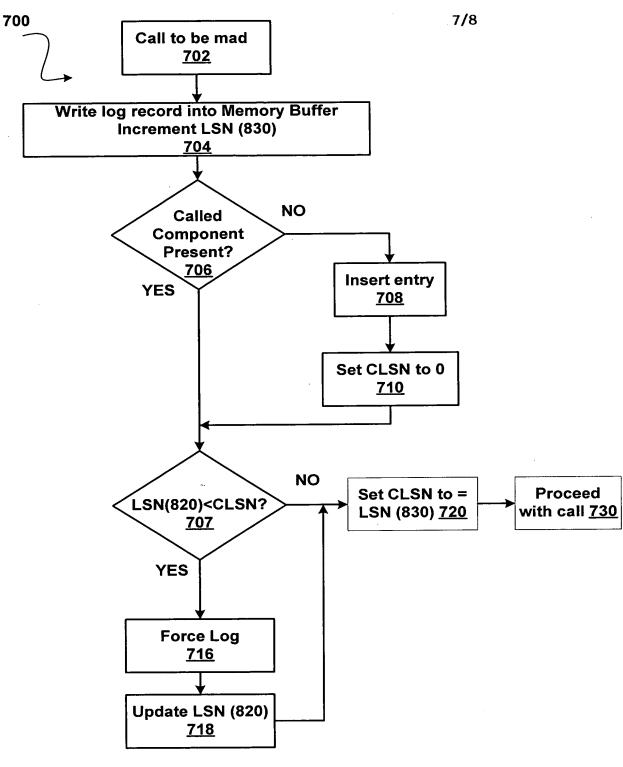


Fig. 7

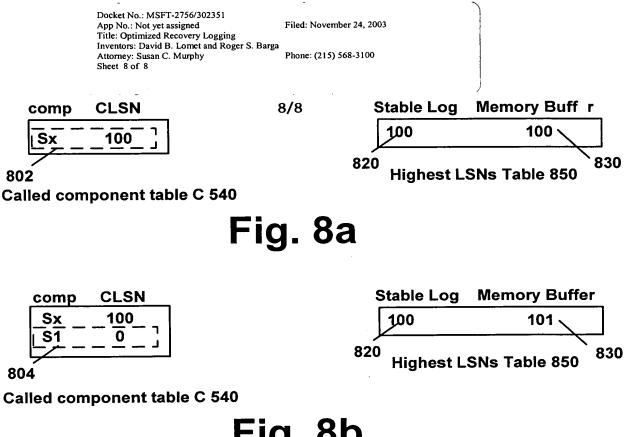


Fig. 8b

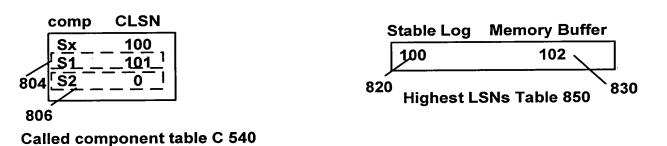


Fig. 8c

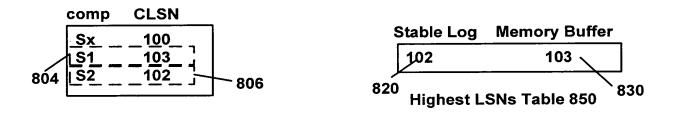


Fig. 8d